



California's Marine Invasive Species Program

California State Lands Commission, Marine Facilities Division

Performance Standards for Ballast Water Discharge

What are performance standards for ballast water discharge?

Performance standards set limits on how many organisms may be released in a specific volume of discharged ballast water.

The specific limits are separated into organism size classes. **California's standards are in the table to the right.**

Organism Size Class	California's Discharge Standard
Larger than 50 μm (micrometer or one millionth of a meter) in minimum dimension	No detectable living organisms
10-50 μm in minimum dimension	Less than (<) 0.01 living organisms per ml (milliliter)
Less than 10 μm in minimum dimension	Less than 10^3 (1,000) living bacteria per 100 ml Less than 10^4 (10,000) living viruses per 100 ml
<i>E. coli</i>	Less than 126 cfu (colony forming units) per 100 ml
<i>Intestinal enterococci</i>	Less than 33 cfu per 100 ml
Toxogenic <i>Vibrio cholerae</i> (human Cholera)	Less than 1 cfu per 100 ml OR Less than 1 cfu per gram of wet weight biological material

****Final discharge standard for California is zero detectable living organisms for all organism size classes, beginning January 1, 2020.**

Why is California implementing performance standards?

Performance standards will be more effective than ballast water exchange for minimizing the release of nonindigenous species. Studies have shown that the effectiveness of exchange can vary widely, depending on factors such as the biological richness of the source port and the configuration of ballast tanks. The state legislature therefore directed the Commission to implement performance standards for ballast water discharges to better protect California's waters from species introductions.

Ballast Water Capacity of Vessel	Implementation for New Vessels (built on or after Jan 1 of years below)	Implementation for Existing Vessels
Less than 1500 MT (metric tons)	2010	2016
1500-5000 MT	2010	2014
More than 5000 MT	2012	2016

When will the performance standards go into effect in California?

Implementation will be phased, and will depend on:

- 1) If the vessel is newly built or not, **AND**
- 2) The ballast water capacity of the vessel

How will vessels meet California's performance standards?

There are many potential strategies. The most feasible options by 2010 will be:

- 1) Retention of all ballast water on board (most protective option)
- 2) Treat all ballast water to be discharged in California with a ballast water treatment system



Photo by Rondal Litterell, CSLC



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Performance Standards for Ballast Water Discharge (Cont.)

Will the California State Lands Commission approve ballast water treatment systems?

No. Vessel owners/operators should work closely with treatment system vendors to determine what system is most appropriate for the type and routing of their vessels.

When performance standards go into effect, California State Lands Commission Marine Safety Inspectors will check vessel discharges to ensure compliance with the performance standards. Treated discharges must also comply with all applicable environmental and water quality laws, regulations and permits.



Where can I find more information?

Internet: www.slc.ca.gov

- Click on the "Divisions" tab
- Select "Marine Facilities Division"
- Select "Marine Invasive Species Program"



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Reports

Dobroski, N., C. Scianni, D. Gehringer, and M. Falkner. 2009. 2009 Assessment of the Efficacy, Availability and Environmental Impacts of Ballast Water Treatment Systems for Use in California Waters. Produced for the California State Legislature.

Dobroski, N., C. Scianni, and M. Falkner. 2008. Ballast Water Treatment Technology Testing Guidelines.

Falkner M., L. Takata, and S. Gilmore. 2006. California State Lands Commission Report on Performance Standards for Ballast Water Discharges in California Waters. Produced for the California State Legislature.

California Code of Regulations

Title 2, Division 3, Chapter 1, Article 4.7. Performance Standards for the Discharge of Ballast Water For Vessels Operating in California Waters